

REMARKS

Applicant thanks the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of certified copies of the priority documents.

Applicant also thanks the Examiner for considering the references cited with the Information Disclosure Statement filed January 16, 2004.

Claims 1-4 and 7-10 are pending in the application. Claims 5 and 6 have been withdrawn pursuant to a restriction requirement.

Objections to the Specification

The specification has been objected to for the frequent use of the word “multiplayer” rather than the intended word “multilayer.” Applicant has amended the specification to correct the typographical errors.

Claim Rejections

Claim 8, which refers to a spatial light modulator, has been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite as it depends from claim 6, which refers to a method for making an optical functional film. Applicant has amended claim 8 to depend from claim 7, which is drawn to a spatial light modulator. Applicant respectfully requests that the § 112, second paragraph rejection be withdrawn.

Claims 1 and 4 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. 5,978,408 to Thornton (“Thornton”). Column 4 of Thornton discloses a multilayer stacked film distributed Bragg resonator formed from alternating layers of AlGaAs

having high and low refraction indices. Thornton does not, however, disclose or suggest controlling the stresses of the plurality of films forming the multilayer film, as recited in dependent claim 2. Applicant has therefore amended independent claim 1 to include the recitations of claim 2. Applicant has canceled claim 2.

Since Thornton does not disclose or suggest at least controlling the stresses of the plurality of films forming the multilayer film as recited in amended independent claim 1, amended independent claim 1 is patentable over Thornton. Claim 4, which depends from independent claim 1, is patentable at least by virtue of its dependency.

Claims 1-4 have been rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. 2001/0048118 to Uchida et al. ("Uchida").

Independent claim 1 has been amended to recite that the plurality of films are formed of SiNx. By forming the films of SiNx, the refractive index of the films can be varied widely, enabling a reduction in the number of films. Further, forming the films of SiNx using CVD more easily controls film stress (claim 4). By contrast, Figs. 3, 5 and 7 of Uchida disclose a multilayer film structure formed from alternating layers of InGaAs having opposite magnitude tensile strains. Uchida does not expressly disclose alternating layers having high and low refraction indices.

Therefore, since Uchida does not disclose or suggest at least a multilayer film having a plurality of stacked films, wherein the plurality of films are formed of SiNx, amended independent claim 1 is patentable over Uchida. Claims 3 and 4, which depend from claim 1, are patentable at least by virtue of their dependency.

Claims 1 and 7-10 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. 6,327,071 to Kimura (“Kimura”), in view of Thornton. Applicant notes that the Examiner’s rejection of claim 1 under 35 U.S.C. § 103(a) over Kimura in view of Thornton is improper since the Examiner has also rejected claim 1 as allegedly being anticipated by Thornton. Therefore, with respect to claim 1, Kimura, if applicable, is merely cumulative, and claim 1 is patentable over the references as previously established.

Applicant traverses the rejections of claims 7-10 on the following basis.

Regarding claim 7, the combination of Kimura and Thornton does not disclose or suggest the invention as claimed. As noted above, Thornton does not disclose at least an optical functional film comprising a multilayer film wherein stresses of prescribed ones of the plurality of films of the multilayer film have opposite signs with respect to adjacent ones of the plurality of films, as recited in amended claim 1 which is incorporated in claim 7. Kimura does not cure the deficiencies of Thornton.

Kimura, as cited by the Examiner, discloses a spatial light modulator and its operation (Figs. 1, 15 and 22). Kimura discloses a diaphragm 4, a light dispersion layer 6, and a electrode 7 that make up a flexible thin film 8 (Figs. 1a and 1b, and col. 5, ll. 29-31), as well as dielectric multilayer film mirrors 225 and 226 (Fig. 22 and col. 14, ll. 1-54). However, the combination of Kimura and Thornton does not disclose or suggest at least an optical functional film comprising a multilayer film wherein stresses of prescribed ones of the plurality of films of the multilayer film have opposite signs with respect to adjacent ones of the plurality of films.

Therefore, claim 7 is patentable over the combination of Kimura in view of Thornton. Since independent claim 7 is patentable, dependent claim 8, which depends from claim 7, should be patentable at least by virtue of its dependency.

Claims 8-10 recite features similar to the features contained in claim 7. Since claim 7 is patentable over the combination of Kimura and Thornton, claims 8-10 are patentable over the combined references for similar reasons.

Conclusion

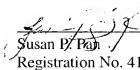
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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